



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.				
10/627,858	07/25/2003	Walter G. Dixon	062891.0945	2644				
5073 BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980	7590 06/27/2007		<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">LOHN, JOSHUA A</td></tr></table>		EXAMINER		LOHN, JOSHUA A	
EXAMINER								
LOHN, JOSHUA A								
			<table border="1"><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>2114</td><td></td></tr></table>		ART UNIT	PAPER NUMBER	2114	
ART UNIT	PAPER NUMBER							
2114								
			<table border="1"><tr><td>NOTIFICATION DATE</td><td>DELIVERY MODE</td></tr><tr><td>06/27/2007</td><td>ELECTRONIC</td></tr></table>		NOTIFICATION DATE	DELIVERY MODE	06/27/2007	ELECTRONIC
NOTIFICATION DATE	DELIVERY MODE							
06/27/2007	ELECTRONIC							

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mike.furr@bakerbotts.com
ptomail1@bakerbotts.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/627,858
Filing Date: July 25, 2003
Appellant(s): DIXON ET AL.

MAILED

JUN 25 2007

Technology Center 2100

Charles S. Fish
Reg. No. 35,870
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 19 February 2007 appealing from the Office action mailed 6 September 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2004/0230862	Merchant et al.	5-2003
5,812,748	Ohran et al.	9-1998

Art Unit: 2114

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-3, 9, 11-14, 16-19, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merchant et al., United States Patent Application Publication number 2004/0230862, filed May 16, 2003.

As per claim 1, Merchant discloses a method for providing redundant data load sharing in a distributed network, comprising: receiving an original data entry (Merchant, ¶0113, where the data stores are the data entries being stored); storing the original data entry in a first one of a plurality of nodes (Merchant, ¶0118, where the entries are replicated across multiple nodes); generating a replicated data entry from the original data entry; storing the replicated data entry in a second one of the plurality of nodes (Merchant, ¶118-119, where a plurality of replicas are generated for the plurality of nodes); identifying a failure of either of the first one or the second one of the plurality of nodes (Merchant, ¶0132, where faulty nodes can be identified); generating a re-replicated data entry for storage at a third one of the plurality of nodes in response to the failure in the first or second one of the plurality of nodes (Merchant ¶0132-¶0137, where the removal of a faulty node will result in the replication of all data entries that were stored thereon to another node in the system to maintain the correct number of replicas). Merchant fails to explicitly disclose the re-replicated data entry being generated from a non-failed node.

It would have been obvious to one skilled in the art at the time of the invention that the invention that Merchant would have generated re-replicated data from the non-failed first or second one of the plurality of nodes to provide to the third of the plurality of nodes.

Art Unit: 2114

This would have been obvious because Merchant discloses re-replicating the data to nodes in the event of node failure (Merchant ¶132-¶137). It would have been obvious that the source of this replication would have been from a non-faulty node in the group because the node being removed from service may have a fault (Merchant, ¶132), and as such, the data contained within that node may be erroneous. Thus modifying the invention of Merchant to only replicate data from non-faulty nodes would provide the obvious benefit of avoiding the replication of erroneous data from a faulted node.

As per claim 2, Merchant further discloses the method of claim 1, further comprising: determining whether there is sufficient capacity in the distributed network to handle data entry replication in response to the failure of the first or second one of the plurality of nodes (Merchant, ¶0133-¶0134, where capacity requirements are checked).

As per claim 3, Merchant further discloses the method of claim 2, further comprising: preventing replication of the original or replicated data entry at the third one of the plurality of nodes in response to insufficient capacity in the distributed network (Merchant, ¶0134, where replication is held off when no satisfactory node is detected).

As per claim 9, Merchant further discloses the method of claim 1, further comprising: establishing a capacity for the distributed network, the capacity representing an amount of data to be stored in the distributed network (Merchant, ¶0116-¶0118, where the nodes that meet the requirements for the redundancy network); establishing a minimum number of the plurality of

Art Unit: 2114

nodes required to provide redundancy in the distributed network (Merchant, ¶0118, where M represents the minimum number of nodes required for redundancy).

As per claim 11, Merchant discloses a system for providing redundant data load sharing in a distributed network, comprising: a plurality of nodes (Merchant, ¶0116), a first one of the plurality of nodes operable to receive and store an original data entry (Merchant, ¶0118), providing a replicate data entry to a second one of the plurality of nodes (Merchant, ¶0123-¶0131, where the loading of each node involves the providing of data between nodes); determine a failure of the second one of the plurality of nodes (Merchant, ¶0132-¶0137, where a faulty node is detected by all nodes in the determination of capacity for handling the failure); providing a re-replicated data entry to a third one of the plurality of nodes in response to failure of the second one of the plurality of nodes (Merchant, ¶0134-0137, where the information is replicated to an additional node). All these actions can be performed by the first node on the system, since each storage node can operate the methods as part of a distributed application (Merchant, ¶0112), however Merchant doesn't explicitly provide for the re-replicated data being provided from the non-faulty node.

It would have been obvious to one skilled in the art at the time of the invention that the invention that Merchant would have generated re-replicated data from the non-failed first one of the plurality of nodes to provide to the third of the plurality of nodes.

This would have been obvious because Merchant discloses re-replicating the data to nodes in the event of node failure (Merchant ¶132-¶137). It would have been obvious that the source of this replication would have been from a non-faulty node in the group because the node

Art Unit: 2114

being removed from service may have a fault (Merchant, ¶132), and as such, the data contained within that node may be erroneous. Thus modifying the invention of Merchant to only replicate data from non-faulty nodes would provide the obvious benefit of avoiding the replication of erroneous data from a faulted node.

As per claim 12, Merchant further discloses the system of claim 11, wherein each node includes a distributed control function operable to control storage and replication of the original data entry (Merchant, ¶0112).

As per claim 13, Merchant further discloses the system of claim 11, wherein the first one of the plurality of nodes is operable to determine whether there is sufficient capacity in the distributed network to handle data entry replication in response to the failure of the second one of the plurality of nodes (Merchant, ¶0133-¶0134, where the capacity is checked).

As per claim 14, Merchant and Ohran further disclose the system of claim 13, wherein the first one of the plurality of nodes is operable to prevent replication of the original data entry at the third one of the plurality of nodes in response to insufficient capacity in the distributed network (Merchant, ¶0134, where replication is prevented when no node of sufficient capacity exists).

As per claim 16, Merchant further discloses the system of claim 11, wherein the capacity of each of the plurality of nodes is adjusted in response to an addition of a new node or failure of an existing node (Merchant, ¶0124-¶0131).

Art Unit: 2114

As per claims 17-19, these claims are merely a system for executing the methods of claims 1-3 rejected above. Merchant discloses a system, see figure 1, and as such the rejections of claims 1-3 are applicable to claims 17-19 as well.

As per claims 22-24, these claims are merely a computer program for executing the methods of claims 1-3 rejected above. Merchant discloses the use of a computer program, see ¶0112, and as such the rejections of claims 1-3 are applicable to claims 22-24 as well.

Claims 4-8, 10, 15, 20, 21, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merchant in view of Ohran et al., United States Patent number 5,812,748, published September 22, 1998.

As per claim 4, Merchant discloses the method of claim 3, including the use of a distributed network, but fails to disclose the additional limitation of adjusting the capacity of the distributed network in response to the failure, in order to store new data entries without replication.

Ohran discloses adjusting the capacity of a network in response to the failure of a first or second node in order to store new data entries without replication (Ohran, col. 7, lines 44-55).

It would have been obvious to one skilled in the art at the time of the invention to include the capacity adjustment of Ohran in the invention of Merchant.

This would have been obvious because Merchant discloses a means for dealing with capacity shortage by reducing the size of the data to be replicated (Merchant, ¶0134). While this

Art Unit: 2114

method is effective in allowing the required degree of replication when small amounts of space are available on each storage node, it fails to include support for a condition in which no space is available for the replication. Ohran provides a system that allows for adjusting the replication capacity attributes to provide a system in which data storage continues even if the minimum numbers of replica storage nodes are not available (Ohran, col. 7, lines 37-65, where replication is suspended when the storage for replication does not exist). The system of Ohran provides the system of Merchant with the obvious benefit of allowing continued, successful operation even when a less than the minimum numbers of replica storage nodes exist.

As per claim 5, Merchant discloses the method of claim 3 involving the replication of data entries in a distributed network (Merchant, ¶0118). Merchant fails to disclose identifying a recovery of the failed first or second one of the plurality of nodes and performing storage and replication of subsequent data in response to this recovery.

Ohran discloses the recovery of the failed first or second one of a plurality of storage nodes and performing storage and replication of subsequently received data entries in response to this recovery (Ohran, col. 7, line 62, through col. 8, line 22, where the connection of the failing storage system to the non-failing server represents the recovery of the failed first or second storage node that is then allowed to begin mirroring again, which allows the replication of subsequently received data entries).

It would have been obvious to one skilled in the art at the time of the invention to include the capacity adjustment and subsequent recovery of Ohran in the invention of Merchant.

Art Unit: 2114

This would have been obvious because Merchant discloses a means for dealing with capacity shortage by reducing the size of the data to be replicated (Merchant, ¶0134). While this method is effective in allowing the required degree of replication when small amounts of space are available on each storage node, it fails to include support for a condition in which no space is available for the replication. Ohran provides a system that allows for adjusting the replication capacity attributes to provide a system in which data storage continues even if the minimum number of replica storage nodes are not available (Ohran, col. 7, lines 37-65, where replication is suspended when the storage for replication does not exist) and restoring replication following any recovery (Ohran, col. 7, line 62 through col. 8, line 22). The system of Ohran provides the system of Merchant with the obvious benefit of allowing continued, successful operation even when a less than the minimum number of replica storage nodes exist and allows for restoration to the desired replication following a recovery.

As per claim 6, Merchant and Ohran disclose the method of claim 5, further comprising: adjusting the capacity of the distributed network in response to the recovery of the failed first or second one of the plurality of nodes (Ohran, col. 7, line 8, lines 7-22, where the failed first or second node is shown in recovery, and Merchant, ¶0124-¶0125, where the addition of any storage device causes capacity adjustments).

As per claim 7, Merchant and Ohran disclose the method of claim 6, further comprising: performing replication of those data entries previously stored but not replicated as a result of the failure of the first or second one of the plurality of nodes (Ohran, col. 8, lines 13-17).

Art Unit: 2114

As per claim 8, Merchant discloses the method of claim 1 involving the replication of data entries in a distributed network (Merchant, ¶0118). Merchant fails to disclose identifying a recovery of the failed first or second one of the plurality of nodes and including the recovered failed first or second one of the nodes in the storage and replication of subsequent data in response to this recovery.

Ohran discloses the recovery of the failed first or second one of a plurality of storage nodes and including this node in the storage and replication of subsequently received data entries in response to this recovery (Ohran, col. 7, line 62, through col. 8, line 22, where the connection of the failing storage system to the non-failing server represents the recovery of the failed first or second storage node that is then allowed to begin mirroring again, which allows the replication of subsequently received data entries).

It would have been obvious to one skilled in the art at the time of the invention to include the capacity adjustment and subsequent recovery of Ohran in the invention of Merchant.

This would have been obvious because Merchant discloses a means for dealing with capacity shortage by reducing the size of the data to be replicated (Merchant, ¶0134). While this method is effective in allowing the required degree of replication when small amounts of space are available on each storage node, it fails to include support for a condition in which no space is available for the replication. Ohran provides a system that allows for adjusting the replication capacity attributes to provide a system in which data storage continues even if the minimum number of replica storage nodes are not available (Ohran, col. 7, lines 37-65, where replication is suspended when the storage for replication does not exist) and restoring replication following any recovery (Ohran, col. 7, line 62 through col. 8, line 22). The system of Ohran provides the

Art Unit: 2114

system of Merchant with the obvious benefit of allowing continued, successful operation even when a less than the minimum number of replica storage nodes exist and allows for restoration to the desired replication following a recovery.

As per claim 10, Merchant discloses the method of claim 9, including the establishment of a minimum number of nodes, but fails to disclose the additional limitation of maintaining at least one occurrence of all data entries should the number of nodes fall to one less than this minimum number.

Ohran discloses storing at least one occurrence of all data entries when the number of storage nodes is one less than the minimum for replication (Ohran, col. 7, lines 44-55).

It would have been obvious to one skilled in the art at the time of the invention to include the storage of at least one occurrence of Ohran in the invention of Merchant.

This would have been obvious because Merchant discloses a means for dealing with capacity shortage by reducing the size of the data to be replicated (Merchant, ¶0134). While this method is effective in allowing the required degree of replication when small amounts of space are available on each storage node, it fails to include support for a condition in which no space is available for the replication. Ohran provides a system that allows for adjusting the replication capacity attributes to provide a system in which data storage continues even if the minimum numbers of replica storage nodes are not available (Ohran, col. 7, lines 37-65, where replication is suspended when the storage for replication does not exist). The system of Ohran provides the system of Merchant with the obvious benefit of allowing continued, successful operation even when a less than the minimum numbers of replica storage nodes exist.

As per claim 15, Merchant discloses the method of claim 14, including the use of a distributed network, but fails to disclose the additional limitation of adjusting the capacity of the distributed network in response to the failure, in order to store new data entries without replication.

Ohran discloses adjusting the capacity of a network in response to the failure of a node in order to store new data entries without replication (Ohran, col. 7, lines 44-55).

It would have been obvious to one skilled in the art at the time of the invention to include the capacity adjustment of Ohran in the invention of Merchant.

This would have been obvious because Merchant discloses a means for dealing with capacity shortage by reducing the size of the data to be replicated (Merchant, ¶0134). While this method is effective in allowing the required degree of replication when small amounts of space are available on each storage node, it fails to include support for a condition in which no space is available for the replication. Ohran provides a system that allows for adjusting the replication capacity attributes to provide a system in which data storage continues even if the minimum numbers of replica storage nodes are not available (Ohran, col. 7, lines 37-65, where replication is suspended when the storage for replication does not exist). The system of Ohran provides the system of Merchant with the obvious benefit of allowing continued, successful operation even when a less than the minimum numbers of replica storage nodes exist.

Art Unit: 2114

As per claims 20 and 21, these claims are merely a system for executing the methods of claims 4 and 5 rejected above. Merchant and Ohran disclose a system, see figure 1 of Merchant, and as such the rejections of claims 4 and 5 are applicable to claims 20 and 21 as well.

As per claims 25 and 26, these claims are merely a computer program for executing the methods of claims 4 and 5 rejected above. Merchant and Ohran disclose the use of a computer program, see ¶0112 of Merchant, and as such the rejections of claims 4 and 5 are applicable to claims 25 and 26 as well.

(10) Response to Argument

For purposes of clarity, applicant's arguments will be presented in italics, and the examiners response will follow for each addressed point.

Claims 1-3, 9, 11-14, 16-19, and 22-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Published Application No. 2004/0230862, issued to Merchant, et al. ...The Examiner has not established that any criteria for a prima facie case of obviousness has been met in this instance.

First, there is no suggestion or motivation in the Merchant, et al. to modify it as proposed by the Examiner. The Examiner has not cited any language within the Merchant, et al. application that would suggest any capability for it to be modified as proposed. The Examiner states that one of ordinary skill in the art would be motivated to provide the feature of the claimed invention, presumably taught by the Merchant, et al. application. The rationale provided by the Examiner for this modification is purely

subjective conjecture and speculation with no objective reasoning being provided to support modifying the Merchant, et al. application as has been proposed. The Examiner has merely provided baseless and subjective conclusory "it would have been obvious to combine" statements using improper hindsight reconstruction without any support for such conclusory statements from anywhere in the Merchant, et al. application. A statement that modifications of the prior art to meet the claimed invention would have been well within the ordinary skill of the art at the time the claimed invention was made because the reference relied upon to teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to modify the teachings of the references. See M.P.E.P. 2143.01. Since the Examiner has not provided any proper reasoning, let alone objective reasoning, the burden to establish the first criteria of a prima facie case of obviousness has not been met.

The examiner respectfully disagrees that the obviousness rejection of claims 1-3, 9, 11-14, 16-19, and 22-24 is improper. With respect to the argument that no suggestion or motivation is provided for the modifications from within the Merchant et al. application, the examiner respectfully disagrees.

These claims are rejected under obviousness utilizing official notice to disclose the obvious improvement of generating re-replicated data from the non-failed node in the system. The motivation for doing so comes from the Merchant reference directly.

Art Unit: 2114

Merchant discloses the need to maintain the proper number of nodes, and re-replicating the data when one is removed, as is shown in ¶132-137, where the node is removed, possibly due to failure, ¶132, a new node needs be identified and brought into the group, ¶135, and where the data is re-replicated to satisfy the replication requirements of the node groups, ¶118. Official notice was taken that this data replica would come from a non-faulty node. One of ordinary skill in the art would have realized that this feature is obvious. The Merchant provides the base motivation in that the removed node could be failing, having developed a fault ¶132, and one of ordinary skill in the art would realize that the replicating data from a potentially faulty node could have a negative impact on the redundant storage reliability on which the Merchant invention is based, ¶2, by providing potentially erroneous data for the replication. Since this data replication is necessary for successful operation of the invention of Merchant, the examiner believes it would have been obvious to one of ordinary skill in the art at the time of the invention to have generated this replicated data from one of the non-failed nodes based upon the clear motivation derived from a basic analysis of the desires and motivations of the Merchant disclosure.

Second, a reasonable expectation of success has not been shown by the Examiner.

There has also been no showing that the modified reference would even be able to perform the functionality of the claimed invention. The Examiner, without the improper hindsight look through the claimed invention, has not addressed how the proposed modification of the Merchant, et al. application would have any success whatsoever let alone a reasonable expectation of success. Therefore, Applicant respectfully submits that

Art Unit: 2114

the Examiner has failed to establish the second criteria for a prima facie case of obviousness.

The examiner respectfully disagrees and believes that a reasonable expectation of success does exist. The Merchant reference discloses a replicated node group that exists to ensure a reliable data source exists, and the obvious modification of the rejection would only serve to aid the invention in this endeavor. This would have been obvious to one of ordinary skill at the time of the invention and does not rely upon improper hindsight.

Third, the Examiner has not shown that the proposed Merchant, et al. application teaches or suggests all of the claim limitations. For example, Independent Claims 1, 11, 17, and 22 recite in general an ability to generate a re-replicated data entry in a non-failed first or second one of a plurality of nodes for storage at a third one of the plurality of nodes in response to a failure in the first or second one of the plurality of nodes. By contrast, the portions of the Merchant, et al. application cited by the Examiner specifically discuss removal of data from a faulty node. Thus, the Merchant, et al. application does not disclose re-replication of a data entry from a non-failed node for storage in a third node in response to identification of a failed node as provided in the claimed invention. The Examiner readily admits that the Merchant, et al. application fails to disclose this feature. The Examiner attempts to justify the rejection of the claims as being obvious over the Merchant, et al. application. However, the portions of the Merchant, et al. application cited by the Examiner are concerned with merely relocating

Art Unit: 2114

data from a node that is being selected for removal and not to data replication for redundant sharing as provided in the claimed invention. Thus, the Merchant, et al. application is still directed to removing data only from a non-working node.

The examiner respectfully disagrees that the proper obviousness rejection fails to disclose all the claimed limitations. Applicant argues that the data to maintain the redundancy group must only be provided by relocation from a node selected for removal, however this is not a requirement of the Merchant disclosure. Merchant, in ¶135, only discloses that the group is moved to the node identified to replace the node being removed, the group is defined as the collection of data that is copied onto a number of nodes, ¶116-¶118. Since Merchant defines multiple copies of each group exist, the examiner believes that the copy provided to the incoming node could come from any of these nodes. In view of this, official notice was taken that the copy would obviously come from a non-faulty node, based upon the disclosure that the node being removed may contain a fault, ¶132. The examiner believes that this proper combination of Merchant and knowledge common to one of ordinary skill in the art discloses all the limitations of these claims.

Second, there is no disclosure in the Merchant, et al. application that suggests the re-replication of data from a first non-failed node for storage in a third node that occurs as a result of a failure in a second node as required in the claimed invention.

Thus, the Examiner has failed to establish the third criteria for a prima facie case of obviousness. As a result of the improper modification of the reference, the lack of any

Art Unit: 2114

expectation of success for the modification, and the lack of disclosure in the cited reference by the Examiner, there is an insufficient basis to support the rejection of the claims.

With respect to the argument that the re-replication is not a result of a failure of a second node, the examiner respectfully disagrees. In the proper combination utilized in the obviousness rejection the entire reason that the re-replication is occurring is because a node is being removed from the system, see Merchant ¶133. Merchant further discloses that this node removal may be a result of the development of a fault, ¶132, thus causing the re-replication to occur as a result of a node failure.

Claims 4-8, 10, 15, 20, 21, 25, and 26 stand rejected under 35 U.S.C. ~103(a) as being unpatentable over U.S. Published Application No. 2004/0230862 issued to Merchant, et al. in view of U.S. Patent No. 5,812,748 issued to Ohran, et al. The Examiner has not established that any criteria for a prima facie case of obviousness has been met in this instance.

First, there is no suggestion or motivation to combine Merchant, et al. application and the Ohran, et al. patent as proposed by the Examiner. The Examiner has not cited any language within the Merchant, et al. application or the Ohran, et al. patent that would suggest any capability for them to be combined as proposed. The Examiner states that one of ordinary skill in the art would be motivated to provide the feature of the claimed invention, presumably taught by the Merchant, et al. application and the Ohran,

et al. patent. The rationale provided by the Examiner for this combination is purely subjective conjecture and speculation with no objective reasoning being provided to support combining the Merchant, et al. application with the Ohran, et al. patent as has been proposed. The Examiner has merely provided baseless and subjective conclusory "it would have been obvious to combine" statements using improper hindsight reconstruction without any support for such conclusory statements from anywhere in the Merchant, et al. application or the Ohran, et al. patent. A statement that modifications of the prior art to meet the claimed invention would have been well within the ordinary skill of the art at the time the claimed invention was made because the references relied upon to teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. See M.P.E.P. 2143.01. Since the Examiner has not provided any proper reasoning, let alone objective reasoning, the burden to establish the first criteria of a prima facie case of obviousness has not been met.

The examiner respectfully disagrees that no motivation for the combination of Merchant with Ohran is provided. Both Merchant and Ohran are concerned with ensuring fault tolerance through data replication (Merchant, ¶2 and Ohran, col. 1, lines 15-19). The device of Ohran provides a method of continuing operation of the system, even if the proper resources do not exist to provide full replicated operation (Ohran, col. 7, lines 44-55). Since the purpose of a fault tolerant system is to provide continued access to the data, it would have been obvious to one of ordinary skill in the art that the reconfiguration of Ohran is a valid way to maintain data

Art Unit: 2114

availability during an event in which the resources are stressed. The invention of Merchant always assumes that some space will be available for replicating groups as necessary. One of ordinary skill in the art would have been aware that resources are not infinite and that the invention of Merchant could benefit from the teachings of Ohran on a method for maintaining the desired availability when resources become unavailable. Thus to further the reliability goals of Merchant one of ordinary skill would have been motivated to include the reconfiguration teachings of Ohran as an improving feature for the invention of Merchant.

Second, a reasonable expectation of success has not been shown by the Examiner. There has also been no showing that the proposed combination of the Merchant, et al. application with the Ohran, et al. patent would even be able to perform the functionality of the claimed invention. The Examiner, without the improper hindsight look through the claimed invention, has not addressed how the proposed combination of the Merchant, et al. application with the Ohran, et al. patent would have any success whatsoever let alone a reasonable expectation of success. Therefore, Applicant respectfully submits that the Examiner has failed to establish the second criteria for a prima facie case of obviousness.

The examiner respectfully disagrees that there is no reasonable expectation of success. Both disclosures teach of successful fault-tolerant data replicating systems. There is no clear aspect of either that would prohibit a successful combination of the capacity adjustment of Ohran in the replication system of Merchant.

Third, the Examiner has not shown that the proposed Merchant, et al. - Ohran, et al. combination teaches or suggests all of the claim limitations. Independent Claim 1, from which Claims 4-8, and 10 depend; Independent Claim 11, from which Claim 15 depends; Independent Claim 17, from which Claims 20 and 21 depend; and Independent Claim 22, from which Claims 25 and 26 depend have been shown to be patentably distinct from Merchant, et al.. Further, the Ohran, et al. patent does not disclose any additional material combinable with the Merchant, et al. patent that would be material to patentability of these claims.

The examiner respectfully disagrees that Merchant fails to disclose all the claim limitations of the independent claims for the reasons mentioned above in the arguments relating to those claims.

In addition, just like the Merchant, et al. application, the Ohran, et al. patent fails to provide any capability to re-replicate data entries as required by the claimed invention. Therefore, Applicant respectfully submits that Claims 4-8, 10, 15, 20, 21, 25, and 26 are patentably distinct from the proposed Merchant, et al. Ohran, et al. combination. Thus, the Examiner has failed to establish the third criteria for a prima facie case of obviousness. As a result of the improper modification of the reference, the lack of any expectation of success for the modification, and the lack of disclosure in the

Art Unit: 2114

cited reference by the Examiner, there is an insufficient basis to support the rejection of the claims.

The examiner respectfully disagrees that the re-replication fails to be taught. The examiner believes that the proper 35 U.S.C. 103 rejection applied with respect to these claims shows that Merchant discloses these limitation, as is shown in the arguments above, relating to the independent claim rejections.

In view of the above arguments, the examiner feels that the obviousness rejections applied to claims 1-26 are correct and appropriate.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.


For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Joshua Lohn 

Conferees:

 
Scott Baderman, Robert Beausoliel


SCOTT BADERMAN
SUPERVISORY PATENT EXAMINER